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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 09/911,067 | 07/23/2001 | Michael Loddock | PRINZ H1718 | 2336 |
| 27667 | 7590 | 06/15/2005 | EXAMINER | |
| HAYES, SOLOWAY P.C. 130 W. CUSHING STREET TUCSON, AZ 85701 | | | PAYNE, DAVID C | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2638 | |

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|-------------------------------|--------------------------------|--|
| Office Action Summary | Application No. 09/911,067 | Applicant(s) LODDOCH ET AL. | |
| | Examiner David C. Payne | Art Unit 2638 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2001.
 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1-13 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☒ The drawing(s) filed on 23 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 6/14/04, 1/11/02.
 4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
 5) ☐ Notice of Informal Patent Application (PTO-152)
 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 10 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claims 10 and 11 recites the limitation "wherein it" in body of claim. There is insufficient antecedent basis for this limitation in the claim. It is not clear as to what component "it" refers to in the preceding claim limitations. Does "it" refer the transceiver module as a whole or to a particular component from which the transceiver is comprised.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2638

6. Claims 1, 2, 4-8, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilliland et al. US 6,350,063 B1 (Gilliland).

Re claim 1, Gilliland disclosed

An optical transceiver comprising a housing (20 of Figure 2), a circuit board (40 of Figure 2) and provided with conductor tracks (90 of Figure 2), at least one optical fiber coupled with said circuit board (e.g., col./lines: 6/55-65), and a plurality of electrically conductive contact elements which are connected with said conductor tracks of said circuit board in an electrically conductive manner (e.g., col./lines: 6/65-67, 7/1-25)

Gilliland does not disclose a circuit board produced by formation technology per se.

However, it would have been obvious to one of ordinary skill in the art at the time of invention that the printed circuit board was "formed" in order to create a pattern of conductive lines embedded in a fixed substrate.

Re claim 2, Gilliland disclosed

wherein a cover plate (80 of Figure 2) is provided which is placed on said circuit board and in which said optical fiber is accommodated.

Re claim 4, Gilliland disclosed wherein said circuit board is equipped with optoelectronic components (e.g., col./lines: 9/5-10).

Re claims 5-7, Gilliland disclosed wherein said contact elements are separate plug contacts such to conduct contacts with grooves (e.g., col./lines: 7/20-25, Figure 2).

Re claim 8, Gilliland disclosed wherein said housing is comprised of an outer part (Figure 1) and an inner part (Figure 2), said inner part being connected with said circuit board and provided with a snap-in hook (20 of Figure 1), so that said transceiver may be locked in place in a counterpiece.

Art Unit: 2638

Re claim 10 (insofar as it is understood), Gilliland disclosed wherein it is constructed as a plug (e.g., col./lines: 6/45-60).

Re claim 12, Gilliland disclosed wherein two optical fibers are provided (e.g., col./lines: 6/55-65).

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gilliland et al. US 6,350,063 B1 (Gilliland) in view of Heremans et al. US 6318901 B1 (Heremans).

Re claim 3, Gilliland does not disclose wherein said cover plate is provided with a receiving hole for receiving said optical fiber, said receiving hole extending perpendicularly to a plane of extension of said cover plate. Heremans disclosed wherein a cover plate is provided with a receiving hole for receiving an optical fiber perpendicular to its plane (Figure 9a). It would have been obvious to one of ordinary skill in the art at the time of invention that orient fibers perpendicular to the plane of the cover plate to accommodate right angle orientation and thereby preventing the need to bend the fiber at a sharp radius.

8. Claims 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilliland et al. US 6,350,063 B1 (Gilliland) in view of Imschweiler US 6,428,361 (Imschweiler).

Re claims 9 and 11 (insofar as it is understood), Gilliland does not disclose wherein said plug contacts having two legs each are designed to be U-shaped and arranged such that said circuit board and an end face of said housing lie between said legs and are held in contact with each other per se. Imschweiler disclosed a U shaped plug RJ-45 plug. It would have been obvious to one of ordinary skill in the art at the time of invention to use a plug of this sort that is widely used and conforms to an interoperable standard.

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gilliland et al. US 6,350,063 B1 (Gilliland) in view of Jones et al. US 6347954 B1 (Jones).

Re claim 13, Gilliland does not disclose wherein there is provided a 1X2 fiber joint as well as a single

Art Unit: 2638

optical fiber for a bidirectional data traffic. Jones disclosed a bidirectional optical transceiver module (e.g., col./lines: 1/25-30). It would have been obvious to one of ordinary skill in the art at the time of invention to use the Gilliland device for bidirectional traffic thereby accommodating communication with two separate devices on each fiber rather than a single uni-directional traffic with one device.

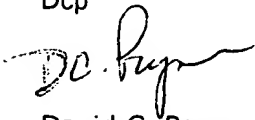
Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Payne whose telephone number is (571) 272-3024. The examiner can normally be reached on M-F, 7a-4p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dcp



David C. Payne
Patent Examiner
AU 2638